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ABSTRACT

School culture has recently emerged as a framework for the study and interpretation of the structure and development of schools. This paper reviews a work culture productivity model and reports the development of a culture instrument. The use of second-order component analysis shows areas of generalization across primary factors. The School Work Culture Profile (SWCP) is organized under four subscales representing the dimensions of: (1) school-wide planning; (2) professional development; (3) program development; and (4) school assessment. The total sample to which the SWCP was administered, after development and pilot testing, was 925 educators from Florida schools, with the ratio of teachers to principals approximately 4 to 1. Overall, findings suggest 10 first-order factors of 52 questions, and findings of the second-order solution suggest there are four higher order factors. These suggest a realignment of school practices around independent sets of work culture features centering on continuous improvement, human resource development, strategic planning and accountability, and collaboration. Four tables present study findings. An appendix contains the SWCP. (Contains 52 references.) (Author/SLD)

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ED 404 339

ASSESSING SCHOOL WORK CULTURE: AN ANALYSIS AND STRATEGY

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ABSTRACT

School culture has recently emerged as a framework for the study and interpretation of the structure and development of schools. This paper reviews a work culture productivity model and reports the development of a culture instrument. The use of second-order component analysis shows areas of generalization across primary factors.

The School Work Culture Profile: A Factorial Analysis and Strategy

School culture has recently emerged as a framework for the study and interpretation of the structure and development of schools (Deal & Kennedy, 1982; Snyder & Anderson, 1986; Rossman, Corbett, & Firestone, 1988; Deal, 1990; Brandt, 1990; Greene, 1991). Culture has been defined as an understanding of "the way we do things around here" and is characterized by shared beliefs and visions, rituals and ceremonies, and networks of communication (Deal & Kennedy, 1983, p.14). Researchers in organizational development have sought to observe, describe, and understand the existing cultures of schools and link the same with the productivity of an organization. Some have stated that the effect of culture on productivity is so powerful that developing a culture that supports school effectiveness is essential to school success (Deal, 1987). Thus, reform efforts in many schools and systems have focused on bringing about changes in existing school cultures (Goldman & O'Shea, 1990; Miles & Louis, 1990).

Studies of organizational culture have used both qualitative and ethnographic approaches, as well as quantitative approaches. The School Work Culture Profile (SWCP) was designed to obtain a quantitative measure of a school's (or system's) work patterns. Rooted in the concept of systems culture, the construct of school work culture is described as a subset of the same. Specifically, it refers to the collective work patterns of a system (or school) in the areas of systemwide/schoolwide planning, staff development, program development, and assessment of productivity, as perceived by its staff members (Snyder, 1988). The instrument is based on the generalization derived from the literature that schools can have a culture that either supports or hinders educational excellence and productivity

and that positive school culture is associated with effective schools (Sweeney, 1987; Deal, 1987; Sergiovanni, 1987).

The purpose of the study was to use primary and second-order principal components analyses to develop a valid instrument to assess work culture. A second-order factor analysis will incorporate an additional level of analysis by showing how the first order factors group into higher order factors. This is important in assessing the global components of work culture.

Managing Productive Schools

During the past decade, Snyder and Anderson (Snyder & Anderson, 1986; Snyder, 1988) implemented a leadership training program known as Managing Productive Schools (MPS) in Florida, Minnesota, and Virginia. The program is based on the research base noted above and also on a systems approach to organizational development. That is, all dimensions of the organization are viewed as interdependent features to enable the system to achieve its purposes and goals.

The model assumes that a vision of a great school that is shared by all members is the basis of transformation. In addition, a school enhancement plan, which becomes a focus for work activity, is designed each year. A rich array of professional development opportunities that center around enhancement goals is provided for staff at all levels. The central thrust of school enhancement is to align the instructional program with school goals, staff development, and school assessment to address the needs of various student populations.

Allocating resources where needs are the greatest creates natural new structures for work and learning. Resources, information and opportunity are fundamental materials for organizational productivity (Johnson, Snyder, & Johnson, 1991). Progress with goals is assessed routinely to provide feedback and feed-forward information concerning desired future performance. These actions keep the school on course (Johnson, Snyder, & Anderson, 1992).

The School Work Culture Profile

The School Work Culture Profile (SWCP) is a staff perceptions survey (Snyder, 1988). School work culture is operationalized on the SWCP with 60 statements pertaining to existing work practices in a school organization. A five-point Likert scale ranging from Strongly Disagree to Strongly Agree, with a midpoint of Undecided, was used to rate each item. The statements were organized under four subscales of the School Management Productivity Model developed by Snyder and Anderson (1986): Planning (P), Staff Development (SD), Program Development (PD), and Assessment (A). The 60 items represented four subscales of 15 items each. The items were presented in random order without reference to subscale identity. Following is a brief review of the productivity model.

Dimension 1: School-Wide Planning. Managers and workers together transform common concerns into specific achievement-oriented development goals. Planning tasks include setting organizational goals that relate to primary outcomes and visions for the organization (Conley, Schmidel, & Shedd, 1988; Davidson & Montgomery, 1985). Tasks are dispersed to permanent and ad hoc work groups that work collaboratively, forming and reforming as needs are addressed (Cook, 1982; Deal & Kennedy, 1982). Individuals are held

accountable for their contributions within multiple small work units (Drucker, 1982; Levin, 1986). Peters and Austin (1985) found that the intensity of management's commitment to organizational goals is the chief difference between great and not-so-great organizations.

Dimension 2: Professional Development. Professional development plans that are linked to organizational goals have the power to enhance individual and group performance (Carneval, 1989; Glenn, 1981). Managers and workers regularly coach each other as they develop new skills and solve problems (Garmston, 1987). Work groups become learning centers for teachers as they share, plan, act, and critique programs or tasks together (Larson & La Fasto, 1989; Little, 1982). Collaborative quality control systems are replacing outdated monitoring systems and provide for regular group reflection, data analysis, and problem solving as the organization works on its plans (Peters & Waterman, 1982). Quality control in the best institutions today is viewed as developmental and provides opportunities for work adjustment in fast paced and turbulent environments (NASSP, 1979; Wise & Darling-Hammond, 1984).

Dimension 3: Program Development. Principals and supervisors convey instructional standards to teachers in productive schools (Coulson, 1977). They also coordinate program development, implementation, and testing activity to address learning challenges (Vanesky & Winfield, 1979). It is also well documented that high levels of parent and community involvement facilitate student success patterns (Gordon, 1979).

Dimension 4: School Assessment. Accountability systems drive assessment activity in productive organizations (Brookover & Lezotte, 1979). The only assessment that appears to have the power to alter individual and organizational performance is a goal-based system

(Odiorne, 1979). Assessment data in productive organizations provide both feedback and a feed-forward loop that influence both short- and long-range planning (Michael, Luthans, Warner, & Hayden, 1981).

The latter model was based on an in-depth study of the literature on productive organizations and work cultures in business and education; over 400 studies were reviewed. Included within the four subscales are ten smaller logical clusters (dimensions): goal setting, work group performance, individual staff performance, staff development, clinical supervision, work group development, instructional program development, resources development, quality control, and assessment. The items on the SWCP have been through face validation with respect to logical relevance of subscale and clarity using local and national panels of judges.

As a direct outcome of the literature base, following are the ten logical scales of the work culture productivity model. The implementation of this model constitutes a school production strategy.

School-Wide Planning

1. Goal Setting: Establish annual school development goals through administrative assessment and selection and also through total staff collaborative decision making.
2. Work Group Performance: Designate school work groups, both teaching teams or department and task forces, to which are assigned school goal objectives and action planning responsibilities.

3. Individual Staff Performance: Establish and operationalize a teacher performance system that includes performance standards, individual goal setting and action planning procedures, performance, monitoring, due process procedures, and evaluation.

Staff Development

4. Staff Development: Develop and operationalize a school program for staff growth that emphasizes new knowledge and skills that are necessary for successful attainment of school development goals (school, work, individual).

5. Clinical Supervision: Develop and operationalize a peer and supervisory clinical supervision program for all teachers and teams, where performance feedback and correctives are provided weekly.

6. Work Group Development: Establish a healthy work climate and develop work group skills in action planning, creative and productive group communications, problem solving, and decision masking. (This competency area resulted from our research analysis.)

Program Development

7. Instructional Program: Establish and operationalize an instructional program that reflects up-to-date research on teaching and learning, and guides the teaching improvement efforts in the following areas: curriculum implementation, student diagnosis and placement, program planning, classroom management, teaching, and learning.

8. Resources Development: Facilitate staff productivity in work groups and provide necessary resources for making the school an increasingly productive unit.

Assessment

9. Quality Control: Establish and operationalize a quality control system for work groups and individuals which includes goal-based observations, conferencing, periodic progress reports and plans, and conferencing and supervisory plans.
10. Assessment: Establish and operationalize a set of school evaluation procedures to assess student achievement gains, teaching team and task force productivity, individual teacher performance, and total school productivity.

Method

The total sample of subjects (n=925) were from 112 Florida schools representing 41 of the 67 school districts in Florida. The ratio of teachers to principals was approximately four to one. Each subject in the sample was sent an SWCP questionnaire with directions and a machine-scorable answer sheet. The data were collected.

The initial request for what now is called the School Work Culture Profile came from Superintendents in Prince George, British Columbia, in 1985. The occasion was a workshop, designed for superintendents who wanted to develop and coach their principals.

After examining the research base for the MPS Model, and discussing the resulting ten MPS competencies and subset skills, the superintendents were asked how principals might use the MPS knowledge base to work with their staffs. A discussion evolved around

the translation of the 100 subset skills, from the ten competencies, into a school diagnostic instrument. Interest centered on helping principals find out what their staff perceptions were about the school's work patterns. They anticipated that the 100 research based subset skills provided a defensible basis for teacher's feedback on the school's work culture. It was perceived that principals could use the feedback from administering the instrument as a guide in planning for school development. That night, a draft instrument concept and item bank was designed and shared the next morning with the superintendents. Their feedback provided encouragement for further development.

An initial 100 item scale was then created and piloted in workshops with principals over the next year. Feedback from each administration of A Perception Profile: My School's Work Culture guided the refinements of the item bank and instrument design. In 1984, the revised instrument was field-tested in Missouri, Maryland, and in Hillsborough, Sarasota, and Pasco Counties in Florida. Pasco County school officials engaged in a multi-level refinement of the instrument, in order to modify the language for greater clarity among teachers, for they saw potential value in the instrument as a district wide data gathering tool.

In 1987, the Pasco County School District received a grant from the Florida Council on Educational Management to become one of three state pilot sites to develop Level III Principalship Certification Programs. A Level III Program would be designed to measure the extent to which principals use the knowledge base and skills taught in their Level II Management Development Program to solve schooling problems over time. Since the MPS Model and training program were the core of the District's Level II program, it was decided that A Perception Profile: My School's Work Profile might provide one measure of a

potential Level III school. At this point, the instrument had not undergone the rigors of reliability and validation studies.

The instrument A Perception Profile: My School's Work Profile was edited and reorganized to create an instrument suitable for research. Introductory paragraphs explaining the concepts were deleted, the fifty items were edited for language clarity, and several items were split into two items. The resulting pool of sixty-five items was randomized, and all references to the four subtest constructs were removed. Directions were written to allow for the use of a machine scorable answer sheet. In addition, the test was renamed the School Culture Profile.

This early edition of the SCP was submitted to reliability testing in the summer of 1987. A sample of forty-six elementary school teachers in Pasco County responded to the items. The Cronbach alphas on the instrument were strong indicators of reliability. Several items were dropped or modified, and one subset of statements was moved from the staff development subscale to the assessment subscale. These refinements resulted in alpha reliability scores of .82 to .85 on the four subscales and composite scale alpha of .95.

The refined edition of the School Culture Profile, renamed the School Work Culture Profile (SWCP), was tested using two different reliability samples. Two classes of graduate students in education, n=46, took the SWCP in the fall of 1987. Alphas for the four subscales were between .88 and .93; the alpha for the total scale was .97. A second sample of fifty elementary school teachers in Lee County participated in a test-retest study with a two week delay time in the spring on 1988. A test-retest Pearson correlation coefficient of .78 was attained.

To investigate content validity, the sixty-two item edition of the SWCP was mailed to a panel of seventeen experts in the field. Fifteen members of this nationwide panel returned an eleven page questionnaire on the language clarity and the item relevance of the SWCP items. A six-point Likert rating scale was used for both the language clarity scale and the item relevance scale. A rating of six was awarded an item judged to be very clear (language clarity scale) or very relevant (item relevance scale). The panel's responses were carefully analyzed both numerically and for item revision suggestions. Item means were calculated for the four subscales and for the total scale. In language clarity, the subscale means ranged from 5.32 to 5.64; the total scale mean equaled 5.45 to 5.72; the total scale mean equaled 5.53. Six items were deleted, four new items were written, and the language of many items was revised.

A second content validity survey containing the revised edition of the SWCP was mailed to a panel of seventeen reviewers. Fourteen members of this panel were on the earlier panel. Two early panel members who had not responded and one panel member who requested to be eliminated were dropped from the second panel. Of the second panel, eleven members responded to an eighteen page questionnaire. The analysis of their responses led to the current selection of the School Work Culture Profile items. See Appendix A for a listing of the instrument questions.

Results

We used the SAS principal components program (SAS Institute, Inc., 1986) to examine the factorial validity of the instrument. A relevant question pertaining to performing a principal components analysis is if different factors will emerge if one's are put

in the main diagonal than if communalities are used. Gorsuch (1983) noted when there were large numbers of variables having moderate to large communalities, the differences were negligible. Harman (1983) noted that there is much evidence in the literature that for all but very small sets of variables, the resulting factorial solutions are little affected by the particular choice of communalities in the principal diagonal of the correlation matrix. Nunnally (1978) noted, "It is very safe to say that if there are as many as 20 variables in the analysis, as there are in nearly all exploratory factor analyses, then it does not matter what one puts in the diagonal spaces" (p.418). A somewhat conservative conclusion is that when the number of variables is moderately large, say larger than 30, and the analysis contains virtually no variables expected to have low communalities, that is 0.4, then practically any of the factor procedures will lead to the same interpretation (Stevens, 1986).

The claim for the so-called convergence of principal components and common factor analysis as the number of variables increases is correct, as long as the universe of variables to which the model is extended has a finite and fixed number of determinate common factors. The justification for performing a principal components analysis in this study was that there were a large number of variables having moderate communalities.

Determining the number of factors to extract from the correlation matrix is a fundamental decision in any analysis (Thompson & Borello, 1986). Many researchers follow the recommendations of Guttman (1954) and extract all factors with eigenvalues greater than one. Other researchers feel the screen test is superior to other methods for determining the number of factors to extract (Cattell, 1965; Linn, 1968; Tucker, Koopman & Linn, 1969).

We used the eigenvalue criterion for this study since the number of respondents was greater than 250 and the mean communality as approximately 0.60.

We performed a first-order principal components analysis (Pedhazur & Schmelkin, 1991; Stevens, 1986) first for the data. Individual questions were retained if they had a factor loading greater than or equal to 0.40. The first order principal components analysis yielded ten factors. The prerotation eigenvalues for the components were 20.38, 2.99, 1.76, 1.59, 1.53, 1.32, 1.19, 1.11, 1.07, and 1.02. Results of these solutions involve a first factor that might be characterized as a general or *g* factor. This is a factor with which most of the items were highly correlated and suggests the existence of a unidimensional factor structure. Generally speaking, the presence of a g factor does not mean that there is only one interpretable factor but rather that there is a large overriding factor with additional factors reflecting various nuances of the factor structure (Daniel, 1991). See Table 1 for a listing of the item means and standard deviations for the group data. The means varied from 2.95 to 4.33, while the standard deviations varied from 0.69 to 1.16.

One result of the first-order principal components analysis were matrix of correlations among the factors. The interfactor correlation matrix can be factored just as the 60 x 60 variable matrix can be. This method is called second-order factor analysis. Kerlinger (1984), Thompson and Borrello (1986), and Thompson and Miller (1981) presented examples illustrating the procedures for second-order factor analysis.

The decision to extract second-order factors was driven by the finding that the first-order varimax solution involved numerous multiple loadings, suggesting a first-order oblique solutions as well as a second-order result. An approximate check as to whether a loading

is statistically significant can be obtained by doubling the standard error, i.e., doubling the critical value required for significance for an ordinary correlation. The statistically significant value for a sample size of 925 is approxiamately 0.17 (Stevens, 1986). Since this number is a minimum, the actual value may be increased. Very often in research, the value is set at 0.4 in absolute magnitude. See Table 2 for the first-order varimax rotated factor pattern matrix.

Four second-order factors were extracted from the interfactor correlation matrix and rotated to the varimax criterion. Second-order factors such as these are then often interpreted. However, Gorsuch (1983) argued that this is not desirable:

> Interpretations of the second-order factors would need to be based upon the interpretations of the variables. Whereas, it is hoped that the investigator knows the variables well enough to interpret them, the accuracy of interpretation will decrease with the first-order factors, will be less with the second-order factors, and still less with the third-order factors. To avoid basing interpretations upon interpretations of interpretations, the relationships of the original variables to each level of the higher-order factors are determined (p. 245).

The 60 x 10 promax rotated first-order factors, therefore, were postmultiplied by the 10 x 4 varimax rotated second-order factors, and the 60 x 4 product matrix were then rotated to the varimax criterion. The decision at any stage for orthogonal rotation terminates the higher-order factor sequence (Loehlin, 1992). Table 3 presents these factor pattern coefficients for items that had coefficients greater than $|\ 0.40\ |$.

Table 2 presents the factor pattern loadings for the first-order factor solution. Items were included if they had coefficients greater than or equal to 0.40 in absolute value. There

are ten primary factors of 52 questions. Eight questions did not attain the designated factor loading or were factorially complex.

The factors presented in Table 3 indicate that there are four second-order factors of 35 total questions. Salient items were those with pattern coefficients greater in absolute value than 0.40.

We used the generalized Kuder-Richardson reliability formula, coefficient alpha (Cronbach, 1951; Ebel, 1965; Novick & Lewis, 1967), to evaluate the reliability of the instrument. This formula was appropriate since a scale in Likert format was employed. The Cronbach alphas for the factors (subscales) follow: subscale one .92, subscale two .88, subscale three .44, subscale four .67, and the composite for all questions .94.

The subscale intercorrelations for the subscales follow: (a) Factors one and two .67, (b) Factors one and three .67, (c) Factors one and four .66, (d) Factors two and three .52, (e) Factors two and four .59, and (f) Factors three and four .51. These intercorrelations do not represent factor scores but subscale scores derived by summing the response category values for the salient items for a subscale.

Discussion

Overall, these findings suggest there are ten first-order factors of 52 questions. The findings of the second-order solution suggests there are four higher order factors of 35 total questions. The first second-order factor (n=14 questions) is composed of seven questions from factor 1 of the first-order solution, three questions from factor 4, one question from factor 6, and two questions from factor 7. This factor is a composite of primarily questions from factor 1, 4, and 7 of the first-order solution.

The second-order factor (n=15 questions) is composed of four questions from factor 2 in the first-order solution, four questions from factor 3, four questions from factor 5, and 1 question from factor 6. This factor is a composite of primarily questions from factors 2, 3, and 5. The third second-order factor is composed of three questions. Questions are from factors 4 and 10 for the first-order solutions. The fourth second-order factor is composed of three questions. Questions are from factors 1 and 9 for the first-order solution.

The second-order factor analysis has generated a new set of relationships among the 60 items on the School Work Culture Profile, which are reflective of several major thrusts for organizational transformation within the Quality Management literatures. We have given names to the four new factors, which include: Continuous Improvement, Human Resource Development, Strategic Planning and Accountability, and Collaboration. A greater interdependence among logical work culture dimensions has emerged, which reinforces the systems thinking imbedded within the SWCP.

Factor one, which is the largest, is titled **Continuous Improvement**. Within this factor exists the complex interaction among goals, work structures, planning, staff development and student success measures. What appears to be reflected is the collaborative interdependence between and among goals, staff development, program development and student success measures. Data bases are used to establish school goals, which then guide the development of new work structures action plans, staff development opportunities and instruction. This tight interdependence between the school planning development and assessment is emphasized, with a clear focus on student success measures.

In *Factor two*, the central theme is **Human Resource Development**. Unlike staff development practices in the past, the emphasis here is on the interdependence between organizational goals and outcomes, and the function performed by training, teaching, work activity and feedback. Goal structures in this factor are those within work units and for individual workers, which provide the context for staff development. Feedback from external and internal sources to the school generates important information to guide continuous professional improvement efforts.

Factor three is a somewhat smaller number of items, and centers around **Strategic Planning and Accountability**. Parents, staff and students participate in developing the school's strategic plan, which is translated into work team and individual performance goals. Teams report progress regularly to the school's leadership where accountability is placed for improvement in the success patterns for all students. Within this factor are the instructional improvement items that center on learning strategies and their effects. This represents somewhat of a departure from traditional planning processes, which center more around leadership decision making and individual teacher implementation. Decision making and accountability have shifted, with this factor structure, to the work unit (team or department) where ranges are expected in programs and services that correspond to the school's goals and to the changing needs of its student populations.

Factor four, the smallest second-order factor, is named **Collaboration**. The common theme in the items within this factor is team work, both for professionals and for students. Time is a factor in success for both groups, and suggests a developmental orientation to work. An assumption in this factor is that both students and staff members are given the

necessary time to work together and to proceed. The emphasis on success corresponds to the fundamental shift to a customer focus within the quality work cultures. Continuous improvement within teams, rather than individuals and the school as a whole, is expected as students and professionals seek new kinds of outcomes.

The last group of items we have called a *Complex factor*. Groups are given the time to work together, with supervisors assisting groups to solve problems. Individuals are given feedback on their performance within a group context, and groups are monitored and assessed for their results and their impact on student performance. School evaluation or assessment is based on goals and their outcomes, and also on external feedback. Again, the gains in school productivity are centered around the student, and suggest the important function of information systems in the continuous improvement process.

Conclusion

The four new second-order factors suggest a realignment of school practices around interdependent sets of work culture features. The *Continuous Improvement* factor suggests that the purpose of schooling today has shifted from the implementation of policies and practices to responding continually to the changing needs of student populations. *The Human Resource Development* factor reflects an alignment of school goals with training and coaching activity. Within a goal driven context, high expectations exist for continuous improvement toward goals. The *Strategic Planning and Accountability* factor also connects the goals and plans from all levels of the school operation, and links them together with expectations for meeting the changing needs of student populations. *Collaboration*, the last factor, reinforces a new organizational process norm for solving problems and inventing new programs and

services to meet needs. Together these factors present a somewhat fresh picture of a school, where the focus is on improving forever the effects of programs and services on student success, where professional talent is developed continually, where strategic planning guides work toward outcomes, and where collaboration among and within groups is the norm. Perhaps this is a portrait of a learning schooling organization for the next century.

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Table 1
Descriptive Statistics for the 925 Subjects

Item	M	SD
1	4.33	0.91
2	3.66	1.00
3	4.25	0.69
4	3.39	1.06
5	4.00	0.88
6	4.12	0.85
7	3.87	0.99
8	3.43	1.09
9	3.65	0.97
10	3.11	1.14
11	3.47	1.00
12	3.58	1.00
13	3.63	0.97
14	2.74	1.06
15	3.55	0.88
16	4.07	0.70
17	3.81	1.01
18	3.86	0.94
19	3.90	0.88
20	4.32	0.74
21	4.21	0.76
22	3.95	0.92
23	4.14	0.70
24	3.59	1.07
25	3.37	1.06
26	4.22	0.75
27	3.49	1.11
28	3.86	1.10
29	3.28	0.98
30	3.87	0.86
31	4.30	0.78
32	3.69	1.00
33	3.89	0.89
34	3.60	1.04
35	3.95	0.94
36	3.69	1.03
37	4.02	0.83
38	3.81	0.91
39	3.43	1.02
40	2.97	1.11

(Continued)

Table 1 (Continued)
Descriptive Statistics for the 925 Subjects

Item	M	SD
41	3.34	1.07
42	3.44	1.17
43	3.69	1.03
44	3.32	1.01
45	4.09	0.92
46	3.75	1.01
47	3.85	0.94
48	3.44	1.01
49	3.71	0.97
50	3.52	1.12
51	2.95	1.10
52	3.54	1.05
53	3.03	1.16
54	3.82	0.97
55	3.60	1.03
56	3.28	0.99
57	3.59	0.99
58	3.90	0.96
59	4.01	0.85
60	3.79	0.94

Table 2
First-Order Varimax Rotated Factor Pattern Matrix (n=925)

Item No.	Factors									
	1	2	3	4	5	6	7	8	9	10
11	0.401	0.172	0.072	0.393	0.156	0.144	0.137	0.183	0.369	0.003
17	0.558	0.205	0.088	0.144	0.126	0.235	0.135	0.132	0.095	0.174
22	0.518	0.265	0.206	0.028	0.120	0.267	-0.047	0.021	0.261	0.247
28	0.480	0.142	0.080	0.245	0.170	0.128	0.040	0.218	0.010	0.293
34	0.638	0.072	0.050	0.322	0.0[illegible]	0.075	0.116	0.284	0.049	0.080
41	0.565	0.049	0.017	0.242	0.095	0.061	0.191	0.357	0.260	0.132
49	0.490	0.120	0.226	0.152	0.211	0.253	0.212	0.233	-0.020	0.024
54	0.613	0.152	0.190	0.122	0.140	0.073	0.288	0.031	0.179	0.074
55	0.555	0.049	0.312	0.195	0.186	0.152	0.224	0.222	0.057	0.021
58	0.500	0.272	0.339	0.205	0.164	0.171	0.151	-0.010	0.217	0.068
59	0.488	0.302	0.365	-0.016	0.157	0.113	0.199	-0.055	0.235	0.072
3	0.024	0.511	0.125	0.140	0.106	0.249	0.078	0.042	0.139	-0.066
16	0.105	0.650	0.117	0.004	0.207	0.108	0.030	0.119	0.083	0.141
20	0.136	0.676	0.147	0.114	-0.016	0.082	0.009	0.045	0.061	0.183
21	0.102	0.537	0.130	0.295	0.237	0.115	-0.070	0.198	-0.074	-0.080
23	0.171	0.526	0.100	0.094	0.115	0.121	0.115	0.029	0.129	0.361
26	0.156	0.608	0.095	0.156	0.173	0.045	0.071	0.027	0.031	0.231
27	0.293	0.146	0.500	0.038	0.112	0.066	0.098	0.260	0.189	0.180
32	0.193	0.162	0.422	0.310	0.064	0.121	0.298	0.128	0.189	0.213
36	0.095	0.263	0.716	0.147	0.083	0.076	0.115	0.112	0.118	-0.005
38	0.155	0.183	0.400	0.345	0.283	0.099	0.136	-0.052	-0.061	0.256
43	0.123	0.098	0.702	0.146	0.166	0.203	-0.055	0.139	0.066	0.144
46	0.130	0.159	0.734	0.106	0.191	0.162	-0.028	0.151	0.120	0.076
18	0.224	0.202	0.115	0.611	0.151	0.193	0.130	0.151	0.108	0.106
19	0.214	0.225	0.207	0.599	0.077	0.185	0.084	0.078	0.105	0.089
25	0.235	0.127	0.159	0.471	0.215	0.070	0.149	0.176	0.263	0.307
1	0.295	0.248	0.099	0.526	0.089	0.277	0.349	-0.056	-0.004	-0.027
4	0.236	0.089	0.104	0.434	-0.034	0.109	0.231	0.322	0.311	-0.024
5	0.217	0.223	0.226	0.415	0.194	0.268	0.144	0.131	0.063	0.066
10	0.099	0.118	0.012	0.289	0.648	0.201	-0.050	0.087	0.244	0.033
42	0.148	0.167	0.162	0.050	0.734	0.125	-0.060	0.064	0.106	0.130
47	0.166	0.227	0.184	0.018	0.654	0.118	0.122	0.041	0.036	0.033
52	0.020	0.095	0.340	0.304	0.409	0.039	0.130	0.073	-0.069	0.101
56	0.204	0.179	0.205	0.032	0.488	0.055	0.339	0.186	0.123	0.041
2	0.284	0.128	0.272	0.239	0.016	0.515	0.313	0.056	0.127	-0.078
6	0.165	0.255	0.153	0.139	0.117	0.707	-0.015	0.021	0.054	-0.076
7	0.004	0.267	0.162	0.151	0.151	0.446	0.096	0.034	0.124	0.346
9	0.197	0.079	0.178	0.088	0.123	0.683	0.182	0.071	0.170	0.175
13	0.169	0.101	0.031	0.178	0.171	0.625	-0.031	0.217	0.001	0.109

(Continued)

Table 2 (Continued)
First-Order Varimax Rotated Factor Pattern Matrix (n=925)

Item No.	Factors									
	1	2	3	4	5	6	7	8	9	10
50	0.284	0.060	0.066	0.166	0.006	0.091	0.693	0.102	0.118	0.145
53	0.344	-0.008	-0.022	0.157	0.037	0.010	0.542	0.288	0.228	0.001
57	0.273	0.074	0.096	0.240	0.069	0.117	0.685	0.166	0.022	0.172
29	0.330	0.068	0.063	0.365	0.014	0.006	0.163	0.457	0.256	0.143
39	0.119	0.124	0.245	0.148	0.067	0.110	0.360	0.526	0.009	0.187
44	0.259	0.083	0.229	0.128	0.105	0.161	0.099	0.650	0.124	0.083
48	0.257	0.190	0.298	0.078	0.127	0.168	0.151	0.612	-0.038	0.100
14	0.054	-0.048	0.100	0.329	0.223	0.120	0.205	0.111	0.558	0.120
15	0.175	0.399	0.244	0.109	0.035	0.065	0.078	0.114	0.479	-0.071
40	0.357	0.026	0.317	-0.037	0.140	0.083	0.199	0.270	0.414	0.156
24	0.333	0.159	0.294	0.084	0.107	0.120	0.049	0.058	0.058	0.510
30	0.211	0.338	0.083	0.062	0.112	0.132	0.185	0.104	0.224	0.447
33	0.048	0.342	0.087	0.122	0.051	-0.011	0.074	0.122	0.004	0.447

Note:- Salient items were items with pattern coefficients greater in absolute value than 0.40.

Table 3
Second-Order Varimax Rotated Pattern Coefficients for Salient Items (n=925)

Item No.	Factors			
	1	2	3	4
1	0.720	0.330	-0.042	0.080
2	0.513	0.242	-0.031	0.375
17	0.400	0.115	0.134	0.173
18	0.409	0.265	-0.114	-0.167
19	0.421	0.308	-0.035	-0.084
34	0.558	-0.035	-0.138	-0.007
35	0.663	0.231	-0.051	0.019
41	0.400	-0.186	-0.300	0.089
49	0.485	0.255	-0.006	0.103
50	0.637	-0.344	-0.040	0.085
54	0.544	0.001	0.120	0.304
55	0.544	0.148	-0.007	0.124
57	0.678	-0.221	-0.044	-0.052
58	0.425	0.260	0.198	0.348
3	0.068	0.442	-0.038	0.274
6	0.153	0.599	0.062	0.382
10	-0.135	0.471	-0.055	-0.110
16	-0.057	0.440	0.149	0.150
21	0.140	0.684	-0.134	-0.049
26	0.108	0.400	0.239	0.032
36	0.233	0.400	0.158	0.215
37	0.278	0.601	0.308	-0.017
38	0.339	0.434	0.376	-0.159
42	-0.179	0.575	0.212	-0.098
43	0.089	0.435	0.306	0.064
45	0.230	0.481	-0.019	0.138
46	0.080	0.451	0.252	0.151
47	0.033	0.558	0.154	0.004
52	0.204	0.453	0.124	-0.266
4	0.338	-0.155	-0.400	0.024
24	0.131	0.047	0.538	-0.057
51	0.108	-0.222	-0.515	-0.049
8	0.046	-0.171	0.170	0.513
15	0.002	0.066	-0.126	0.449
59	0.343	0.184	0.293	0.482

Note:- Salient items were items with pattern coefficients greater in absolute value than 0.40.

Table 4
Second-Order Varimax Rotated Pattern Coefficients for Items That Were Factorially Complex or Loaded Less Than 0.40 (n=925)

	Factors			
Item No.	1	2	3	4
31	0.533	0.453	0.148	0.114
53	0.489	-0.421	-0.336	0.731
5	0.361	0.373	-0.011	-0.022
7	-0.036	0.265	0.328	0.037
9	0.148	0.212	0.197	0.289
11	0.301	0.028	-0.216	0.155
12	0.144	0.087	0.051	0.173
13	0.062	0.389	0.010	0.031
14	-0.035	-0.230	-0.146	0.054
20	0.080	0.364	0.209	0.173
22	0.117	0.159	0.349	0.362
23	0.049	0.195	0.339	0.080
25	0.210	0.004	0.045	-0.198
27	0.131	0.072	0.159	0.126
28	0.303	0.112	0.144	-0.134
29	0.249	-0.253	-0.324	-0.158
30	0.015	-0.069	0.320	0.036
32	0.360	0.041	0.137	0.035
33	-0.014	0.037	0.308	-0.226
39	0.252	-0.091	-0.186	-0.226
40	0.058	-0.236	0.026	0.254
44	0.084	-0.024	-0.329	-0.133
48	0.185	0.144	-0.206	-0.144
56	0.182	0.219	-0.009	0.021
60	0.289	0.298	0.097	-0.245

Note: Salient items were items with pattern coefficients greater in absolute value than 0.40.

APPENDIX A
SCHOOL WORK CULTURE PROFILE

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1. The school administration and the staff identify goals to improve the school each year.
2. The staff development program builds the school's capacity to solve problems.
3. Instructional programs are guided by learning objectives.
4. Work groups (committees, department teams, grade level groups, etc.) are assessed on their contribution to the achievement of a school's goals.
5. Data about student achievement, school services and programs are analyzed by the professional staff to aid in identifying school development goals.
6. Staff development programs provide opportunities to learn new knowledge.
7. The readiness level of students is considered when selecting/developing instructional programs.
8. Staff members provide constructive feedback to each other regularly.
9. Staff development programs provide opportunities to practice newly learned skills.
10. Parents participate in identifying school goals.
11. Work groups monitor and revise their work through periodic assessment of the progress made toward goals.
12. Instructional programs are planned cooperatively by the professional staff.
13. Staff development programs are designed to facilitate adult learning.
14. Students have input into school development goals.
15. Individual staff members alter their work patterns in response to feedback.
16. Instructional programs facilitate student mastery of learning objectives.
17. Staff members have opportunities to develop skills for working successfully in a group/team.
18. School evaluation is based on school goals.
19. Tasks are identified for accomplishing school development goals.
20. Classroom organization and activities facilitate student learning.
21. School evaluation includes assessment of student achievement data.
22. Staff members have opportunities to learn by working cooperatively with colleagues.
23. Teachers identify learning expectations for students.
24. School time is structured to provide for cooperative work activity.
25. School evaluation is a cooperatively planned system.
26. Students are provided with reinforcement, correctives, and feedback on their performance.
27. Staff members are supervised and/or coached regularly.
28. Professional staff members are assigned to work in teams.
29. Work groups are assessed on the extent to which work group goals are achieved.
30. Students engage in cooperative learning activities.
31. Professional staff members participate on school-wide task forces and/or committees.
32. Supervision of teaching is based on cooperatively identified goals and emerging needs.
33. Students are provided with sufficient time to succeed in learning tasks.
34. Work groups report periodically on progress to the school leadership team.
35. School-wide task forces and committees work to achieve school development goals.

APPENDIX A (Continued)

36. Supervision helps teachers to solve instructional problems.
37. Resources are used to meet school goals.
38. Commonly held beliefs, values and norms are consistent with school development goals.
39. Individual staff members are assessed on the degree to which individual performance goals are achieved.
40. Staff members observe and coach each other.
41. Work group plans are reviewed by the leadership team.
42. Parents serve as a resource to the school's instructional program.
43. Supervision builds and maintains professional self-esteem.
44. Individual staff members are assessed on their contribution to work group goals.
45. High performance expectations exist for each role group (for example: teachers, counselors).
46. Supervision reinforces strengths in current job performance.
47. Community resources are used in the school's instructional programs.
48. Individual staff members are assessed on their contribution to overall school goals.
49. Work group leaders have opportunities to develop specific leadership skills.
50. All staff members develop individual performance goals to contribute to school development goals.
51. Student achievement data are used to assess each teacher's performance.
52. The school's budget reflects prioritized school goals.
53. Each staff member's performance goals are reviewed with the school's leadership team.
54. Staff member's share their ideas and concerns for improving work productivity in their work group.
55. The school's leadership team helps work groups to succeed.
56. Periodic feedback from sources outside the school is used to modify work practices.
57. Individual performance goals for staff members are linked to the school's development goals.
58. Staff members problem solve, plan, and make decisions together in productive ways.
59. Staff members function as a resource to each other.
60. Student achievement is assessed in relation to overall school goals.

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